



# Volunteer Lake Assessment Program Individual Lake Reports

## ROCKWOOD POND, FITZWILLIAM, NH

### MORPHOMETRIC DATA

Watershed Area (Ac.):	832	Max. Depth (m):	6.7	Flushing Rate (yr <sup>-1</sup> )	1.8	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	76	Mean Depth (m):	3.2	P Retention Coef:	0.63	1977	OLIGOTROPIC	
Shore Length (m):	2,600	Volume (m <sup>3</sup> ):	989,500	Elevation (ft):	1111	1992	OLIGOTROPIC	

### TROPHIC CLASSIFICATION

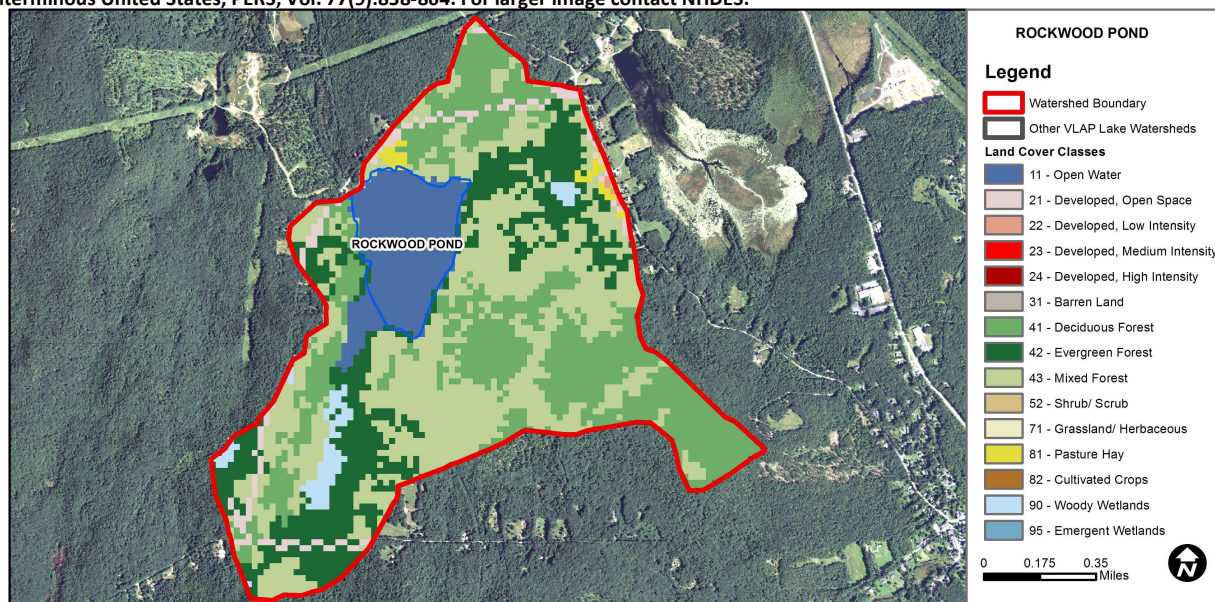
### KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Cautionary	< 10 samples and 1 exceedance of criteria. More data needed.
	Chlorophyll-a	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	No Data	No Data for this parameter.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

### WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	10.4	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	3.23	Deciduous Forest	27.81	Pasture Hay	0.97
Developed-Low Intensity	0.12	Evergreen Forest	18.89	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	36.18	Woody Wetlands	2.41
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



# VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

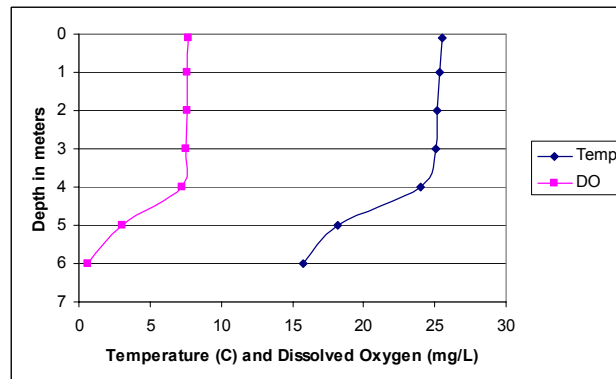
## ROCKWOOD POND, FITZWILLIAM, NH

### 2012 DATA SUMMARY

#### OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- 🔥 **CHLOROPHYLL-A:** Chlorophyll levels were very low, have decreased since 2010, and were less than the NH lake median. Historical trend analysis indicates chlorophyll tends to fluctuate from year to year.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity levels were low and below the NH lake median.
- 🔥 **TOTAL PHOSPHORUS:** Epilimnetic (upper water layer) phosphorus levels were low and less than the NH lake median. Historical trend analysis indicates a relatively stable epilimnetic phosphorus level since monitoring began. Hypolimnetic (lower water layer) and Outlet phosphorus levels were also low.
- 🔥 **TRANSPARENCY:** Transparency improved slightly from 2011 and was greater than the NH lake median. Historical trend analysis indicates a relatively stable transparency since monitoring began.
- 🔥 **TURBIDITY:** Turbidity was low at all stations.
- 🔥 **pH:** pH levels tend to be less than desirable and potentially critical to aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Increase monitoring frequency to three times per summer to better assess shifts in summer water quality and historical trends. Logging activity was noted in the watershed however tributaries were dry and limited the ability to assess the impact to the lake. Watch for increased erosion, turbidity and sedimentation in the tributary and lake, and if noted, contact DES. Keep up the great work!

#### Dissolved Oxygen & Temperature Profile



Station Name	Alk.	Chlor-a	Cond.	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	ug/l	NVS	VS	ntu	
Deep Epilimnion	1.6	1.84	29.8	8	4.55	4.53	0.65	6.30
Deep Hypolimnion			31.3	11			0.84	5.76
Outlet			30.2	7			0.61	6.25

**NH Median Values:** Median values for specific parameters generated from historic lake monitoring data.

**Alkalinity:** 4.9 mg/L  
**Chlorophyll-a:** 4.58 mg/m<sup>3</sup>  
**Conductivity:** 40.0 uS/cm  
**Chloride:** 4 mg/L  
**Total Phosphorus:** 12 ug/L  
**Transparency:** 3.2 m  
**pH:** 6.6

**NH Water Quality Standards:** Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

**Chloride:** < 230 mg/L (chronic)  
**E. coli:** > 88 cts/100 mL – public beach  
**E. coli:** > 406 cts/100 mL – surface waters  
**Turbidity:** > 10 NTU above natural level  
**pH:** 6.5-8.0 (unless naturally occurring)

#### HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Variable	Data fluctuate annually, but are not significantly increasing or decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Stable	Data not significantly increasing or decreasing.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:  
 Sara Steiner  
 PO Box 95  
 Concord, NH 03302-0095  
 (603) 271-2658  
 sara.steiner@des.nh.gov



#### Historical Deep Spot Chlorophyll-a, Epilimnetic Total Phosphorus & Transparency Data

